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**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No. : 10/729,184 Confirmation No. : 2383  
Applicant(s) : Ghislain LEFEVRE et al.  
Filed : December 4, 2003  
Title : METHOD OF REALIZING AN OPTICAL FUNCTION ON A  
COMPONENT OF A MOTOR VEHICLE INDICATING OR LIGHTING  
DEVICE

Art Unit : 1762  
Examiner : Marianne L. PADGETT

Docket No. : 1004286-823US  
Customer No. : 85775

**APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37**

Mail Stop Appeal Brief -Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Assignee ("Appellant") submits submit this Appeal Brief in furtherance of the Notice of Appeal filed January 26, 2009. A petition for a two-month extension of time is enclosed. The Commissioner is authorized to charge the requisite fee under 37 C.F.R. § 41.20(b)(2) in the amount of \$540.00, and any additional fees necessitated by this Appeal Brief to deposit account no. 50-4827 (Order No. 1004286-823US).

Appellant respectfully request that this Brief be fully considered by the Board of Patent Appeals and Interferences ("Board"), and that the pending rejections of the claims be reversed. This Brief is organized according to the headings set forth in 37

C.F.R. § 41.37(c)(1)(i) through (c)(1)(ix).

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## **I REAL PARTY IN INTEREST**

The real party in interest for this appeal is the Appellant Valeo Vision, 34 Rue Saint Andre, 93012 Bobigny, France, assignee of the entire right, title and interest in this application. The inventors, Messrs. Lefevre and Giroud ("Applicants"), executed a written assignment to Valeo Vision, which was recorded by the U.S. Patent and Trademark Office Assignment Division on May 13, 2004 at Reel 015318, Frame 0771.

## **II RELATED APPEALS AND INTERFERENCES**

There are no interferences known to the Appellant, or Appellant's legal representative which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in this appeal.

## **III STATUS OF THE CLAIMS**

Claims 6, 17, 28, 31, and 32 are pending in this application and stand rejected pursuant 35 U.S.C. § 103(a). These are the appealed claims. Specifically, the three rejections for alleged obviousness are:

- Claim 32 was rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0071940 to Arnold et al. in view of U.S. Patent No. 5,817,243 to Shaffer et al. [7/25/08 office action at pp. 2-6].
- Claim 32 was rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,521,326 to Fischer et al. in view of Shaffer. [7/25/08 office action at pp. 6-8].
- Claims 6, 17, 28, and 31 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Fischer in view of Shaffer and either U.S. Patent No. 6,017,138 to Reiss et al. or 4,954,422 to Lamprecht. [7/25/08 office action at pp. 8-9].

A complete copy of the claims involved in this appeal (as amended during the course of prosecution of this application) is provided in Claims Appendix, Section VIII.

#### **IV STATUS OF AMENDMENTS**

Since the July 25, 2008 Final Office Action, no claims have been amended.

#### **V SUMMARY OF CLAIMED SUBJECT MATTER**

The independent claims currently pending in this application are 17, 28 and 32. Dependent claims 6 and 31 depend from independent claims 17 and 28, respectively.

In one aspect (Claim 17), Applicants' invention as claimed is directed to a method of manufacturing a mask for motor vehicle headlamps, which emit a predetermined light beam. [1/4-6; 2/22-29; 5/1-3; 6/1-4; 8/1-4; 9/3-6; 10/7-10; Fig. 1 (reference numeral 13); Figure 2 (reference numeral 23); Figure 3 (reference numeral 33)].<sup>1</sup> A component of a motor vehicle headlamp is provided. [1/3-4; 2/23-24; 2/31-3/2; 4/14-15; 4/19-20; 5/4-5; 7/9-11; 8/14-16; 9/19-21]. The component defines at least one orifice for holding a motor vehicle headlamp lens. [7/12-13; 8/17-18; 9/22-23; Fig. 1 (reference numeral 13); Figure 2 (reference numeral 23); Figure 3 (reference numeral 33)]. A surface of the component is exposed to laser radiation to texture it. [3/8-11; 3/16-19; 4/6-9; 5/19-20; 9/28-30]. After laser radiation exposure, the component is metallized to form the mask. [3/16-19; 4/6-12; 5/19-20; 10/1-2]. The textured surface of the component after

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<sup>1</sup> Exemplary citations are made to particular pages and lines of the originally-filed specification in the following format: "page #/line x-line y"; e.g., "2/8-23," which refers to page 2, lines 8-23.

metallization provides a matt zone that does not reflect light. [2/22-29; 3/16-19; 5/4-12; 5/18-25; 10/3-6; Fig. 3 (reference numeral 38)].

In another aspect (Claim 28), Applicants' invention as claimed is directed to a method of providing a motor vehicle reflector having at least one pre-selected matt zone. [1/4-6; 2/22-29; 5/15-18; 5/25-30; 11/14-23; Figs. 4 to 6 (reference numeral 40)]. A plastics material is injection molded into a predetermined shape having a surface. [3/6-8; 5/25-30; 10/27-28; Figs. 4 to 6 (reference numeral 40)]. A portion of the surface is exposed to laser radiation to texture the portion of the surface. [3/8-11; 3/16-19; 4/6-9; 5/19-20; 9/28-30]. A metal layer is applied onto the surface of the laser radiation exposed material to form said reflector. [3/16-19; 4/6-12; 5/19-20; 10/1-2; 11/15-18]. The metallized surface of the material is reflective except for the portion exposed to laser radiation. [3/16-19; 5/4-12; 5/15-20; 5/22-25; 10/3-6; 10/21-26; Fig. 5 (reference numeral 20a); Fig. 6 (reference numeral 20b)]. That portion defines a pre-selected matt zone that is not reflective. [2/27-29; 5/10-12; 5/22-25; 11/9-13; 11/20-23; Fig. 5 (reference numeral 20a); Fig. 6 (reference numeral 20b)].

In yet another aspect (Claim 32), Applicants' invention as claimed is directed to a method of manufacturing right and left-side headlamp reflectors from a single mold. [1/4-6; 5/15-18; 5/25-30; 11/14-23; Figs. 4 to 6 (reference numeral 40)]. A plastic material is injection molded in a single mold to provide two identical components. [3/6-8; 5/25-30; 10/27-28; Figs. 4 to 6 (reference numeral 40)]. Each component has an elliptical inner face. [10/15-16; 10/21; Figs. 4-5 (reference numeral 20)]. The inner faces

of the two identical components are metallized to provide two metallized components that reflect light rays emitted by a light source. [3/12-15; 3/20-24; 4/1-5; 4/19-24; 5/4-9; 5/15-29; 10/15-17; 11/14-23]. A right-side headlamp reflector and a left-side headlamp reflector are produced from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces. [5/25-30; 11/14-23; Figs. 5 and 6 (reference numeral 40)].

## **VI GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claim 32 stands rejected as allegedly being unpatentable pursuant to 35 U.S.C. § 103(a) as obvious over U.S. Pat. Publ. No. 2002/0071940 to Arnold et al. (“Arnold”) in view of U.S. Pat. No. 5,817,243 to Shaffer et al. (“Shaffer”).

2. Claim 32 stands rejected as allegedly being unpatentable pursuant to 35 U.S.C. § 103(a) as obvious over U.S. Pat. No. 6,521,326 to Fischer et al. (“Fischer”) in view of Shaffer.

3. Claims 6, 17, 28, and 31 stand rejected as allegedly being unpatentable pursuant to 35 U.S.C. § 103(a) as obvious over Fischer in view of Shaffer and either U.S. Patent No. 6,017,138 to Reiss et al. (“Reiss”) or 4,954,422 to Lamprecht (“Lamprecht”).

## **VII ARGUMENT**

To resolve this appeal, the Board must decide whether the PTO examiner has met the PTO’s initial burden of factually supporting any *prima facie* conclusion of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). That burden can be met by showing each of the claim elements is found in or obvious from the prior art, and

also providing a clear articulation of the reason(s) why the claimed invention would have been obvious. The rejections on appeal fail on both scores.

First, while the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, \_\_\_, 127 S. Ct. 1727, 1739 (2007), emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739, that is not the situation here. The present claims are *not* directed to a prior art structure that was merely altered by substituting one element in the structure for another known element. PTO has not demonstrated that all of Applicants’ claim elements are known in the prior art and that one of ordinary skill could combine the prior art elements by known methods into the subject matter being claimed. *See, e.g.*, Exhibit 1 (comparing Applicants’ claim 32 with the cited art).<sup>2</sup>

Second, outside the context of a simple substitution, a holding of obviousness requires an explicit showing that “there was an apparent reason to combine the known elements in the fashion claimed.” *KSR*, 550 U.S. at \_\_\_, 127 S. Ct. at 1740-41. Such a showing requires “some articulated reasoning with some rational underpinning to support

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<sup>2</sup> Likewise, with respect to the rejection of independent claims 17 and 28, and dependent claims 6 and 31, the cited references (Fischer, Shaffer, Reiss and Lamprecht) taken alone or in combination fail to teach, disclose, or suggest metallizing said component after laser radiation exposure to form said mask, wherein the textured surface of the component after metallization provides a matt zone that does not reflect light (claim 17) or applying a metal layer onto the surface of the laser radiation exposed material to form said reflector, the metallized surface of the material being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective (claim 28).

the legal conclusion of obviousness.” *Id.*, 550 U.S. at \_\_\_, 127 S. Ct. at 1741 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Here, Applicants claims have not been shown to be the products of mere simple substitution of known elements into known methods, and yet proper reasons have not been articulated in the record for cobbling together disparate portions of the cited references.

A conclusion of obviousness cannot be based on facts gleaned only through hindsight. To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction—an illogical and inappropriate process by which to determine patentability. *Sensonics Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996) (citing *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983)). The invention must be viewed not after the blueprint has been drawn by the inventor, but as it would have been perceived in the state of the art that existed at the time the invention was made. *Id.* (citing *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985)). Applicants respectfully suggest that is precisely what the PTO has done in making the rejections on appeal.

Accordingly, reversal of the rejections is required because each of the claim elements has not been shown in or shown to be obvious from the cited references and also proper reasoning has not been articulated for modifying the cited references to arrive at Applicants’ claimed invention. Below we address in turn each of the rejections of the

claims and explain in detail why Applicants' claims are patentable and should not have been rejected under Section 103 for alleged obviousness.

A. **ISSUE #1 -- Claim 32 is Patentably Distinct from Arnold in view of Shaffer**

The rejection of claim 32 as allegedly being obvious over Arnold in view of Shaffer cannot stand. Applicants' claim 32 is directed to a method of manufacturing right and left-side headlamp reflectors from a single mold by first injection molding a plastic material in a single mold to provide two identical components, and then metallize the inner faces of the two identical components so they reflect light rays, and then using selective laser ablation to provide non-metallized zones that do not reflect light and provide differentiated right and left-size headlamp reflectors.

Neither cited reference, Arnold nor Shaffer, discloses the step of producing unique right and left headlamps from two identical injection molded components by selective laser ablation. Moreover, an appropriate reason to combine Arnold's multi-layer mold manufacturing method with Shaffer's laser decoration method to arrive at the subject matter of Applicants' claim 32 has not been provided.

1. **Arnold**

Most generally, Arnold is directed to multi-layered structures having a substrate and a metallized layer deposited on at least one side of the substrate. [Arnold ¶¶0020, 0021]. These multi-layered structures optionally can be "placed into an injection molding chamber and an injection molding resin can be deposited on the metallized substrate." [Arnold ¶¶0021, 0060].



Arnold says that metallized multi-layer structures may be used to create reflective surfaces on lamp housings, vehicle reflectors or head lights. [Arnold ¶0053]. In that context, Arnold discloses that “the resin 16 and metallized film 15 can be formed to create a lamp housing 30 so as to reflect and focus light that is emitted from a light source 32.” [Arnold ¶0053]. Such a lamp housing having a semi-circular shape is shown in Arnold’s Figure 12:

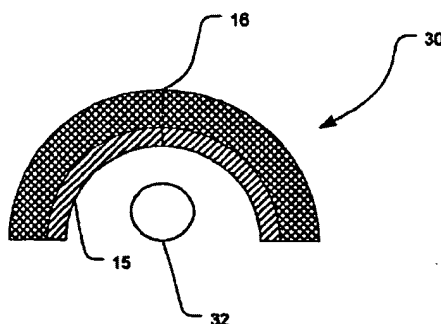


FIGURE 12

With regard to Applicants’ method claim 32, Arnold’s method of manufacture involves several steps and is shown in Figures 13-18. First, a film is formed into a desired shape as depicted in Figures 13-14 to create a molding insert. This film forming step is *not* described as injection molding. The film may be decorated by various printing methods either before or after this forming step. [Arnold ¶¶0055, 0056; Figure 15]. Second, the molding insert optionally can be metallized with a metal layer. [Arnold ¶0057; Figure 16]. Third, the metallized molding insert is subjected to insert injection molding:

“[T]he pre-shaped and metallized insert 42 is manually or robotically placed in an injection molding cavity 44.... The molten plastic resin 43 is delivered into the injection mold cavity 44 so as to contact the metallized insert 42.” [Arnold ¶0060; Figure 17-18].

From this discussion, it is clear that *none* of the steps of Applicants’ method claim 32 is disclosed. Arnold generally discloses that injection molding can be used. Arnold does not teach, disclose or suggest the more specific step recited in Applicants’ method claim 32, “injection molding a plastic material in a single mold to provide two identical components, each component having an elliptical inner face.” Although more general aspects of Arnold’s teachings *might* be useful in practicing Applicants’ method claim 32, Arnold does not disclose, expressly or inherently, the specific claimed step.

Likewise, Arnold’s metallization step occurs prior to the injection molding. [Arnold ¶0057; Figure 16]. This is important because Applicants’ two identical components are the result of the earlier injection molding step. In other words, in Applicants’ claim 32 the metallization step occurs *after* the injection molding step, while in Arnold it occurred *prior to* the optional injection molding. Accordingly, Arnold also fails to teach, disclose or suggest “metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source” as recited in Applicants’ method claim 32.

Further still, Arnold fails to teach, disclose or suggest “producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation” as recited in Applicants’ method claim 32.” Arnold’s disclosures

relating to lasers are limited to laser heating or melting of metal to create a mechanical and conductive bond between metal. [Arnold ¶¶0024, 0064]. Laser ablation is not taught anywhere in Arnold. The office action admits that Arnold fails to disclose producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces. [7/25/08 office action at p. 3 (Arnold doesn't relate to "employing headlamp reflectors with symmetrical elliptical the [sic] shapes, so that a single mold can be used for both right & left side reflectors"]]. It is further conceded that Arnold fails to disclose modifying headlight reflectors via patterning of the reflective metal as well as doing so via laser ablation. [7/25/08 office action at p. 3].

This third step of Applicants' method claim 32 cannot be written out of the claim and ignored. Each step of a claimed method must be considered to properly make out a *prima facie* case of obviousness. See MPEP § 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)).

The rejection made by the Examiner used the phrase "design consideration" which is not found in the MPEP. Instead the MPEP discusses a "design choice" rationale at Section 2144.04, in connection with obviousness rejections relying on the mere *re-arrangement* of parts. See, .e.g., *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). Suffice it to say, the stated rejection is not merely

trying to re-arrange the manufacturing steps of Arnold, but rather is trying to supply entire steps that are *missing* from the cited references. Resort to a “design choice” rationale is legally improper in this context. Moreover, even if “design choice” were proper, the MPEP reminds us that “[t]he prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant’s specification, to make the necessary changes in the reference device.” (citing *Ex parte Chicago Rawhide Mfg. Co.*, 223 U.S.P.Q. 351, 353 (Bd. Pat. App. & Inter. 1984)). The required motivation or reason is absent from the rejection.

The proper factual bases also are missing. Despite the assertion in the above-quoted paragraph of the office action that various things allegedly were known in the prior art, the office action fails to point to any reference that actually has this disclosure. Conjecture is not an appropriate basis for a rejection. It is worth repeating, it is undisputed that Arnold fails to disclose right and left headlight reflectors, modifying those headlight reflectors via patterning of the reflective metal or doing so via laser ablation.

The Office Action points to some alleged documentation that illustrates Model T headlamps, where both right and left headlight have identical and symmetrical shape. Respectfully, even if the Model T headlamps were relevant, they would teach away from Applicants’ claim 32. Unlike the Model T headlamps, Applicants’ claim 32 relates to reflectors having an elliptical inner face. Unlike the Model T, Applicants’ claim 32 relates to using laser ablation to differentiate the reflective surfaces so that the right and

left headlamps will provide different reflective surfaces and thereby provide different beam patterns. The Examiner's undocumented recollections about the content of history class that car manufacturing parts should be interchangeable (and therefore one would use the Model T's identical, symmetrical headlamps), that would be directly contrary to Applicants' claim 32.

There is absolutely nothing in Arnold that would have suggested to take his semi-circular head lights in Figure 12, and to instead substitute elliptical head lights, and also to take the same (i.e., identical) blank components and to modify them to make individualized right and left elliptical head lights, and to do so with laser ablation. This is disclosed in Applicants' specification, but it is utterly and completely absent from Arnold's disclosure. As discussed below, Shaffer does not alleviate these shortcomings.

## 2. Shaffer

Shaffer, the secondary reference that is to be combined with Arnold, is directed to a method of applying decorative contrast designs to automotive and motorcycle parts (e.g., chrome plated motorcycle gas cap, plastic lens for motorcycle lamp, chrome coated glass mirror) using lasers. [Shaffer, Col. 1, lines 36-45 and Col. 2, lines 47-57]. The laser is used to ablate portions of a previously applied mirror coating. [Shaffer, Col. 5, lines 20-24; see also Col. 2, lines 27-29 and Col. 7, line 62 – Col. 8, line 3].

Shaffer only was cited for its supposed disclosure of producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that

do not reflect light on the inner faces. Shaffer is not alleged to alleviate the deficiencies with regard to the first two steps of Applicants' claim 32. Because Arnold and Shaffer share deficiencies with regard to the first two steps, the rejection is improper for this reason alone. Nonetheless, Appellant explains below its disagreement with the office action's understanding of Shaffer. This is a further basis for withdrawal of the rejection.

At best, Shaffer generally discloses the use of laser ablation with certain car parts. There is absolutely nothing in Shaffer, however, that would have suggested to take the same (i.e., identical) injection molded blank components and to modify them to make individualized right and left elliptical head lights, and to do so with laser ablation. There is nothing in Shaffer (or in Arnold) that would suggest that the laser ablation of Shaffer should be used to improve the methods of Arnold to arrive at the subject matter of Applicants' method claim 32. Shaffer certainly does not use laser ablation to improve a manufacturing process in the same way that Applicants' disclose. Shaffer merely seeks to make decorative contrast designs without painting or silk screening. [Shaffer, Col. 1, lines 6-39 and 46-52]. Examples 3 and 4 (the only examples which relate to a plastic substrate) expressly describe the "laser decoration" of the plastic. [Shaffer, Col. 7, lines 24-57]. Why would Shaffer's decorative method have motivated one of ordinary skill in the art at the relevant time to modify Arnold's method so that the injection molding was done prior to metallization?

In this regard, the Office Action argues that Shaffer motivates the use of decorating car parts via metallization and ablating that metal to form designs. [7/25/08

Office Action at p. 5]. Assuming that motivation is found in Shaffer, it would not suggest the rearrangement of Arnold's manufacturing steps. The laser ablation could be done in accordance with Arnold's teachings *before* injection molding. Nothing in Arnold or Shaffer suggests differently.

Moreover, Shaffer's supposed teaching to metallize and then ablate to decorate car parts does not motivate the narrow scope of Applicants' claim 32. Applicants' claim 32 does not lay claim to the use of metallization and laser ablation to decorate car parts generally. Rather it is narrower in scope and is directed to a specific method of making right and left-side headlamp reflectors by using laser ablation to differentiate otherwise identical injection molded components. While hindsight might teach the examiner that the injection molding of Arnold and the metallization and ablation of Shaffer could be rearranged to provide Applicants' claim 32, that is a far cry from finding actual motivation to do so in the prior art.

In sum, Arnold in view of Shaffer fails to teach, disclose or suggest the subject matter of Applicants' claim 32, such as "producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces." There also is no motivation in the prior art to arrive at this step. The rejection should be withdrawn.

**B. ISSUE #2 -- Claim 32 is Patentably Distinct from Fischer in view of Shaffer**

**1. Fischer**

Fischer, the other primary reference, is directed to glass-fiber reinforced composites composed of at least two moldings immovably bonded together by laser welding. More specifically, Fischer discloses that at least 50% by weight of the first molding is composed of various specified weights of A) polyester, B) fibrous filler pretreated with an aminosilane compound and with an epoxy polymer, C) elastomeric polymer, and D) other additives. [Fischer, Col. 1, lines 44-63]. These molding compositions “may be processed by thermoplastic processes known per se, to give moldings,” such as “injection molding.” [Fischer, Col. 11, lines 29-36]. Fischer’s composites are said to be useful for producing various “headlamp components,” such as “headlamp housings, headlamp frames, headlamp retainers and headlamp guides, preference being given to headlamp frames.” [Fischer, Col. 16, lines 43-47]. Fischer does not disclose that his moldings may be used for a reflector.

What is missing from Fischer, and what is not identified in the previous office actions, are any specific teachings, disclosures or suggestions of how this manufacture is to be accomplished according to Fischer. This is because Fischer is largely silent in this regard, which is fatal to the rejection of Applicants’ method claim 32.

To be explicit, Fischer does not teach, disclose or suggest “injection molding a plastic material in a single mold to provide two identical components, each component having an elliptical inner face” as recited in Applicants’ method claim 32. Fischer also



fails to teach, disclose or suggest “metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source” as recited in Applicants’ method claim 32, although Fischer does mention that its composites can be used with a reflecting, metallized surface. [Fischer, Col. 16, lines 35-37]. There are no details regarding how this metallization is achieved.

The Office Action states, without any actual evidence in the prior art, that “identically molded components” are “obvious known style variations employed by the automotive industry.” [7/25/08 Office Action at p. 7]. Such unsupported speculation is not proper in a rejection. Moreover, even if it can be supported, it is irrelevant unless it can be tied to the subject matter of Applicants’ claim 32 (manufacturing right and left-side headlamp reflectors from a single mold).

That the Office Action fails to appreciate the actual scope of Applicants’ claim 32 is clear when reading page 7 of the Office Action where large parts of the claim are dismissed based on the Examiner’s conjecture. In that passage, the Office Action states “performing the metal patterning via laser ablation *has no particular significance* to the limitation of employing a single mold for right & left side headlamp reflectors.” Yet, Applicants’ specification expressly teaches that the laser ablation *is particularly significant* precisely because “exposure to laser radiation mak[es] it possible to differentiate the reflectors.” [Specification, page 5, lines 25-30; see also page 11, lines 14-23]. Indeed, Applicants’ Figures 5 and 6 depict exemplary right and left-side

headlamp reflectors that have been differentiated in accordance with Applicants' claim 32.

The reason for the Office Action's dismissive tone regarding the laser ablation is simple. Fischer has exactly one sentence in its disclosure relating to the use of lasers with the disclosed composites. That sentence suggests the possibility that an undefined "laser inscription" step may also be used in conjunction with the disclosed composites. [Fischer, Col. 17, lines 5-8]. Due to the limited nature of that disclosure, it is unclear whether this "inscription" is even an ablation of a metallized surface. What is clear, however, is that Fischer fails to teach, disclose or suggest "producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation" as recited in Applicants' method claim 32." There is absolutely nothing in Fischer that would have suggested to take the same (i.e., identical) blank components and to modify them to make individualized right and left elliptical head lights, and to do so with laser ablation.

The office action seems to admit that Fischer's laser inscription step does not correspond to Applicants' laser ablation step recited in method claim 32, but attempts to rely on Shaffer for that disclosure. Shaffer does not alleviate these shortcomings, however.

2. Shaffer

As discussed above in connection with issue #1,<sup>3</sup> Shaffer is directed to a method of applying decorative contrast designs to automotive and motorcycle parts. Shaffer discloses that a laser may be used to ablate portions of a previously applied mirror coating. [Shaffer, Col. 5, lines 20-24; see also Col. 2, lines 27-29 and Col. 7, line 62 – Col. 8, line 3].

Shaffer is cited for its supposed disclosure of using selective laser ablation to produce right-side and left-side headlamp reflectors from the metallized components.

However, Shaffer has a mere general disclosure of the use of laser ablation to apply decorative designs on certain car parts. Shaffer does not suggest taking two identical injection molded blanks and modifying them to make individualized right and left elliptical head lights. There is nothing in Shaffer (or in Fischer) that would suggest that the laser ablation of Shaffer should be used to improve the methods of the Fischer to arrive at the subject matter of Applicants' method claim 32. Shaffer certainly does not use laser ablation to improve a manufacturing process in the same way that Applicants' disclose.

In sum, Fischer in view of Shaffer fails to teach, disclose or suggest the subject matter of Applicants' claim 32, such as "producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of

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<sup>3</sup> The entirety of the discussion of Shaffer in connection with issue #1 is incorporated herein, as the distinctions are equally applicable whether the Shaffer reference is combined with Arnold or Fischer.

the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces.” The rejection should be withdrawn.

C. **Issue#3: Claims 6, 17, 28 and 31 are Patentably Distinct from the Fischer in view of Shaffer, Reiss and Lamprecht**

The rejection of claims 6, 17, 28 and 31 also is traversed. The cited references (Fischer, Shaffer, Reiss and Lamprecht) taken alone or in combination fail to teach disclose or suggest all of the features of Applicants’ independent claim 17 (metallizing said component after laser radiation exposure to form said mask, wherein the textured surface of the component after metallization provides a matt zone that does not reflect light) and all of the features of Applicants’ independent claim 28 (applying a metal layer onto the surface of the laser radiation exposed material to form said reflector, the metallized surface of the material being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective).

As discussed above in connection with issue #1 and issue #2, neither Fischer nor Shaffer discloses metallizing *after* laser radiation exposure to provide a mask for motor vehicle headlamps. To the contrary, Fischer’s laser inscription step occurs after the metallization has taken place. [Fischer, Col. 17, lines 5-8]. Likewise, Shaffer uses laser to remove previously applied metal to create a decorative image. [Shaffer, Col. 5, lines 20-24; see also Col. 2, lines 27-29 and Col. 7, line 62 – Col. 8, line 3]. The office action apparently agrees with this understanding and relies on Reiss and Lamprecht. [7/25/08 office action at p. 8]. Reiss and Lamprecht do not alleviate this deficiency.

1. **Reiss**

Reiss is directed to a motor vehicle headlamp with a cut-off line reflector and two masks that define two shadow zones on the reflector. Reiss discloses that “opaque paint” should be applied to *the discharge lamp (2), not to a motor vehicle reflector itself*. [Reiss, Col. 4, lines 49-54]. Reiss contains no discussion of lasers or of metallizing motor vehicle reflectors. None is cited in the office action. Thus, Reiss fails to teach, disclose or suggest “metallizing said component after laser radiation exposure to form said mask, wherein the textured surface of the component after metallization provides a matt zone that does not reflect light,” as recited in Applicants’ claim 17.

2. **Lamprecht**

Lamprecht is directed to a photosensitive recording material having a base, a particulate layer on top of the base, and a metallic layer on top of the particulate layer. Lamprecht is *not* addressing the manufacture of motor vehicle headlamp reflectors. Instead, this disclosure “relates to a photosensitive recording material for recording information ... under the action of light having a high energy density.” [Lamprecht, Col. 1, lines 8-12]. In the photosensitive record material arts, Lamprecht states that use of “coherent metal layers” is problematic because of the relatively high reflectance. [Lamprecht, Col. 1, lines 34-46].

Appellant respectfully submits that the citation of Lamprecht in a Section 103 rejection is improper because it constitutes non-analogous art. *See* MPEP § 2141.01(a). Lamprecht is not within the present inventors’ field of endeavor, and is not

reasonably pertinent to the particular problem with which the present inventors were involved. *See In re Clay*, 966 F.2d 656, 659, 23 U.S.P.Q.2d 1058, 1061 (Fed. Cir. 1992).

In any case, Lamprecht is clearly distinguished from Applicants' claim 17. The office action points to the alleged disclosure by Lamprecht that the plastic substrate may be texturized by laser prior to metallization. [7/25/08 office action at p. 8 (citing Col. 1, lines 47-52)]. That passage relates to a discussion of a prior art European Patent No. 01 07 379, which Lamprecht characterized as disclosing texturing a plastic substrate by laser interferometry and having a metal layer applied by vapor deposition to reduce the reflectance of a coherent semiconductor or metal layer.

Thus, Lamprecht fails to teach, disclose or suggest "metallizing said component after laser radiation exposure to form said mask, wherein the textured surface of the component after metallization provides a matt zone that does not reflect light," as recited in Applicants' claim 17.

None of the cited references discloses the metal layer application step as recited in Applicants' independent claim 17. Respectfully, Applicants' independent claim 17 is asserted to be patentably distinct from Fischer in view of Shaffer, and further in view of either Reiss and Lamprecht for at least these reasons. Independent claim 28 ("applying a metal layer onto the surface of the laser radiation exposed material to form said reflector, the metallized surface of the material being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective") and dependent claims 6 and 31 also are patentably distinct for at least similar reasons.

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### **VIII CONCLUSION**

The cited references, taken alone or in combination, fail to teach, disclose, or suggest all of the elements recited in the pending claims. Accordingly, Appellant believes that all pending claims are in condition for allowance. Appellant therefore respectfully requests that the pending rejection be reversed, and this application be permitted to proceed to issuance.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 50-4827, ORDER NO. 1004286-823US.

Respectfully submitted,  
LOCKE LORD BISSELL & LIDDELL, L.L.P.

By: 

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**IX CLAIMS APPENDIX**

Claims 1-5. **(canceled)**.

Claim 6. **(rejected)**: The method according to claim 17, wherein the laser radiation is produced by a laser selected from the group consisting of: a YAG laser, a CO<sub>2</sub> laser and an excimer laser.

Claims 7-16. **(canceled)**.

Claim 17. **(rejected)**: A method of manufacturing a mask for motor vehicle headlamps adapted to emit a predetermined light beam, the method comprising:  
providing a component of a motor vehicle headlamp, the component defining at least one orifice for holding a motor vehicle headlamp lens;  
exposing at least one surface of said component to laser radiation to texture said component; and  
metallizing said component after laser radiation exposure to form said mask,  
wherein the textured surface of the component after metallization provides a matt zone that does not reflect light.

Claim 18-27. **(canceled)**.

Claim 28. **(rejected)**: A method of providing a motor vehicle reflector having at least one pre-selected matt zone, the method comprising:  
injection molding a plastics material into a predetermined shape having a surface;



exposing a portion of the surface to laser radiation to texture the portion of the surface; and

applying a metal layer onto the surface of the laser radiation exposed material to form said reflector, the metallized surface of the material being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective.

Claims 29-30. **(canceled)**.

Claim 31. **(rejected)**: The method according to claim 28, wherein the applying a metal layer step comprises completely metallizing the surface with a layer of aluminum.

Claim 32. **(rejected)**: A method of manufacturing right and left-side headlamp reflectors from a single mold, the method comprising:

injection molding a plastic material in a single mold to provide two identical components, each component having an elliptical inner face;

metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source; and

producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces.

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**X EVIDENCE APPENDIX**

None. There is no Evidence Appendix attached to this Appeal Brief.

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**XI RELATED PROCEEDINGS APPENDIX**

None. There is no Related Proceedings Appendix attached to this Appeal Brief.

**EXHIBIT 1 – Comparison of Applicants’ Claim 1 And Cited References**

Claim 32. (rejected)	Arnold (primary)	Fischer (primary)	Shaffer (secondary)
A method of manufacturing right and left-side headlamp reflectors from a single mold, the method comprising:	<b>NOT DISCLOSED.</b> Arnold relates to multi-layered structures having a substrate and a metallized layer deposited on at least one side of the substrate, which may be used to create reflective surfaces on lamp housing, vehicle reflectors or head lights. [Arnold ¶¶0020, 0021, 0053].	<b>NOT DISCLOSED.</b> Fischer relates to glass-fiber reinforced composites composed of at least two moldings (e.g., injection molding) immovably bonded together by laser welding that may be used for headlamp housings, headlamp frames, headlamp retainers and headlamp guides. [Fischer, Col. 1, lines 44-63; Col. 11, lines 29-36; Col. 16, lines 43-47]. The word “reflector” is not used in Fischer.	<b>NOT DISCLOSED.</b> Shaffer relates to a method of applying decorative contrast designs to automotive and motorcycle parts (e.g., chrome plated motorcycle gas cap, plastic lens for motorcycle lamp, chrome coated glass mirror) using lasers. [Shaffer, Col. 1, lines 36-45 and Col. 2, lines 47-57]. The words headlamp and reflector are not used in Shaffer.
injection molding a plastic material in a single mold to provide two identical components, each component having an elliptical inner face;	<b>NOT DISCLOSED.</b> At best, Arnold discloses that pre-shaped multi-layer metallized structures may be used as substrates onto which other components may be injection molded. [Arnold ¶¶0021, 0055-0060]. Moreover, Arnold's Figure 12 lamp housing is semi-circular and not elliptical.	<b>NOT DISCLOSED.</b> Although Fischer states the molding compositions may be processed by injection molding, there is no disclosure of injection molding components with elliptical inner faces. [Fischer, Col. 11, lines 29-36].	<b>NOT DISCLOSED.</b> Shaffer discusses “molding” in the Background section as a prior method for decorating surfaces upon which the invention improves. [Shaffer, Col. 1, lines 13-16]. Injection molding and elliptical inner faces are not mentioned.
metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source; and	<b>NOT DISCLOSED.</b> Arnold's metallization step occurs prior to the injection molding. “[T]he pre-shaped and metallized insert 42 is manually or robotically placed in an injection molding cavity 44.... The molten plastic resin 43 is delivered into the injection mold cavity 44 so as to contact the metallized insert 42.” [Arnold ¶¶0057, 0060; Figure 16-18]. Also, there is no teaching that an elliptical inner face should be metallized.	<b>NOT DISCLOSED.</b> Although Fischer mentions that the composites can be used with a reflecting, metallized surface, there is no teaching that an elliptical inner face should be metallized. [Fischer, Col. 16, lines 35-37].	<b>NOT DISCLOSED.</b> Shaffer discloses that metal-plates parts may be used with his decoration method, but does not describe how that metallization is accomplished. [Shaffer, Col. 1, lines 48-49; Col. 4, lines 12-13 and 64-67]. There is no teaching that an elliptical inner face should be metallized.
producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces.	<b>NOT DISCLOSED.</b> Arnold merely discloses laser heating or melting of metal to create a mechanical and conductive bond between metal. [Arnold ¶¶0024, 0064]. Office action admits Arnold fails to disclose producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces. [7/25/08 office action at p. 3].	<b>NOT DISCLOSED.</b> Fischer has one sentence suggesting the possibility that an undefined “laser inscription” step may also be used in conjunction with the disclosed composites, but selective laser ablation to form differentiated right and left headlamp reflectors is not disclosed. [Fischer, Col. 17, lines 5-8].	<b>NOT DISCLOSED.</b> Although Shaffer's laser may ablate mirror coatings, it does not disclose taking the same (i.e., identical) injection molded blank components and to modify them to make individualized right and left elliptical head lights, and to do so with laser ablation. [Shaffer, Col. 5, lines 20-24; see also Col. 2, lines 27-29 and Col. 7, line 62 – Col. 8, line 3].